

EPI Update for Friday, August 21, 2015
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **Update on last week's wedding outbreak**
- **Worst wedding outbreak ever**
- **Rocky Mountain Spotted Fever is not just in the Rocky Mountains**
- **Meeting announcements and training opportunities**

Update on last week's wedding outbreak

Of the four stool specimens collected, two tested positive for norovirus. Interviews of ill attendees noted that all had attended the reception, but several did not attend the wedding ceremony. Comparing food histories of ill to well attendees implicated raw fruit served at the reception as the contaminated item; however, this item doesn't explain all the illnesses, so other foods or fomites may have contributed to spread of this virus. The hypothesis is that one or more attendees - ill with norovirus - contaminated at least one food item as well as surfaces at the wedding reception, resulting in this outbreak.

Worst wedding outbreak ever

In case you thought that was bad, consider this: over a decade ago, on a Saturday morning, IDPH was called by a local TV reporter asking about all the people getting sick at a local wedding (FYI: this NOT the way we like to find out about outbreaks!). Immediately, public health epidemiologists were dispatched to the wedding site and the three involved ERs.

More than 130 of the 250 located and interviewed wedding guests (about half of the 500 estimated attendees) had symptoms of cyanosis, headache, dizziness, nausea and vomiting, shortness of breath, etc. Twelve ambulances had transported guests to the three ERs; 63 guests were seen in an ER (most were driven to the ERs by other guests); and 20 were hospitalized. Fortunately no deaths were reported.

Carbon monoxide poisoning was quickly ruled out by the fire department. The ERs rapidly diagnosed wedding guests with methemoglobinemia (blood drawn from guests was chocolate-colored). The investigation turned to sources of chemicals that would oxidize hemoglobin to methemoglobin. Later it was discovered that when the wedding punch was made, sodium nitrite had been mistakenly added rather than the citric acid called for in the recipe; sodium nitrite is one of many chemicals that can cause methemoglobinemia. (An early hint: the wedding guests complained that the punch had "tasted funny.")

Three other groups had bought the same lot of this punch. They were quickly contacted and warned. Two threw the punch away before being served; one baby shower group did serve the punch, but few drank it because of the "funny" taste and no illnesses were reported from baby shower guests.

IDPH and the Department of Inspections and Appeals worked with the local punch maker to take steps ensuring that this would not happen again.

Rocky Mountain Spotted Fever is not just in the Rocky Mountains

In July, an Oklahoma woman developed flu-like symptoms; the next day she was hospitalized and diagnosed with Rocky Mountain Spotted Fever (RMSF), a tick-borne disease caused by the bacterium *Rickettsia rickettsii*. Because of disease progression, she unfortunately had amputations of all four limbs. For more information, visit <http://www.cnn.com/2015/08/14/health/oklahoma-tick-bite-amputation-spotted-fever/>

RMSF is found in Iowa, and can range greatly in severity of disease. Symptoms include a sudden fever, headache, nausea, muscle and abdominal pain, and loss of appetite, occurring two to 14 days after being bitten by an infected tick. More than half of the patients who get RMSF are not aware of a tick bite. The namesake rash of small, pink spots occurs in 90 percent of all patients. Rapid (within five days) treatment with doxycycline significantly reduces the risk of severe disease and death.

Most U.S. cases occur in Oklahoma, Arkansas, Missouri, Tennessee, and North Carolina (note: not the Rocky Mountain areas). For more information on disease distribution, visit www.cdc.gov/rmsf/stats/. Ten cases were reported in Iowa in 2014 and four have been reported thus far in 2015.

To prevent RMSF, prevent tick bites by using a DEET-containing insect repellent. For more information on RMSF, visit [www.idph.state.ia.us/cade/DiseaseIndex.aspx?disease=Rocky Mountain Spotted Fever \(RMSF\)](http://www.idph.state.ia.us/cade/DiseaseIndex.aspx?disease=Rocky Mountain Spotted Fever (RMSF)).

Meeting announcements and training opportunities

2015 Iowa Immunization Summit, October 28-29, 2015, Des Moines, Iowa, covering principles of vaccination, general recommendations, immunization strategies, and nationally renowned speakers on immunizations and vaccine issues. For more information, visit www.idph.state.ia.us/ImmTB/Immunization.aspx?prog=Imm&pg=ImmHome.

Have a healthy and happy (and much cooler) week!

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